

However, the Examiner alleges that the use of a monochromator filter assembly is obvious in view of the disclosure in Mook and that it would have been obvious to use the aperture of adjustable size in view of the teaching in Eguchi.

Contrary to the Examiner's assertions, Applicants respectfully disagree that it would have been obvious to modify the charge particle device of Adamec to include a monochromator of Mook and an adjustable aperture of Eguchi, which will be apparent based on the discussion which follows.

The device of Adamec is directed to a charged particle device. Eguchi is directed to a completely different device, namely an optical pick-up which focuses light from a light source onto a back surface of an optical disc. Since the devices of Adamec and Eguchi are completely different, these references are not analogous art of one another. Clearly, the art of a charged particle device (Adamec) is not analogous to the art of a device which focuses light from a light source (Eguchi). Therefore, since the two devices are non-analogous with one another, one of ordinary skill in the art would not have contemplated combining the disparate teachings of the two wholly unrelated references together to in any way lead one of ordinary skill in the art to modify the charged particle device of Adamec to include an adjustable size aperture for the light of Eguchi.

Referring to the respective devices of Adamec and Eguchi in more detail, Adamec describes a multi-beam charged particle device including an aperture plate having multiple apertures to form multiple beams of charged particles (typically electrons). These beams are simultaneously directed onto a surface of a specimen, thereby generating secondary electrons which are detected and measured for analysis.

Eguchi, on the other hand, describes an optical pick-up device having a variable aperture (3; 12) that is used to vary the numerical aperture of an objective lens (4; 10) in order to focus light onto a back surface of an optical disc regardless of the thickness of the disc. Even if, *arguendo*, one of ordinary skill in the art had contemplated combining the disparate teachings of Adamec and Eguchi, the aperture plate described in Eguchi would not satisfy the functional requirement of Adamec, i.e. the production of multiple charged particle beams. Accordingly, there fails to be an apparent reason why one of ordinary skill in the art would have included the aperture plate of Eguchi in the device of Adamec, as doing so would not provide any known benefit.

In view of the foregoing, one of ordinary skill in the art would not have modified the device of Adamec to include the aperture of Eguchi. It must be emphasized that in order for two or more references to be combined in an obviousness-type rejection under 35 U.S.C. § 103(a), there must be some apparent reason why one of ordinary skill in the art would have been led to combine the references cited. *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 398 (2007). Stated differently, there must be some apparent reason why one of ordinary skill in the art would have modified the closest prior art, adding to it or removing from it various elements known in the art, to close the gap between the closest prior art and that of the claimed invention. *KSR Int'l*. For example, one reason would be if one of ordinary skill in the art had recognized a problem identified in the art and had knowledge of a benefit or solution to be achieved by modifying the prior art in order to arrive at the claimed invention. However, due to differences between the two respective devices of Adamec and Eguchi, one of ordinary skill in the art would not have seen any benefit from modifying Adamec to include the aperture of Eguchi.

In addition, one of ordinary skill in the art would not have included the monochromator filter of Mook in the device of Adamec. The Examiner refers to the passage at page 16, lines 24 to 31 of Adamec which makes reference to an integrated unit 17, "which acts like a Wien filter." As the Examiner correctly observes, Adamec "does not disclose this filter is a monochromator filter," as required by independent claim 1 of the subject application. In fact, the integrated unit 17 is used to introduce a small degree of spatial separation of charged particles having different energies within each beam in order to compensate for chromatic aberration (i.e. spatial spreading of the beam due to energy spread), which occurs particularly strongly when an off-axis beam passes through the (downstream) objective lens. Thus, no energy is excluded. The energy range of particles entering the integrated unit 17 is the same as the energy range of particles reaching the specimen.

In view of the disclosure in Mook, Applicants respectfully submit that one of ordinary skill in the art would not have modified the charged particle device of Adamec to include a "monochromator filter" disclosed in Mook. In Mook, the monochromator filter is used to select beam particles in a particular energy range. Thus, the monochromator filter described in Mook is not suitable for the Adamec device. Accordingly, one of ordinary skill in the art would not have been led to include the Mook monochromator filter in the Adamec device, as doing so would have provided no known benefit, in accordance with the holding in *KSR, Int'l*. Accordingly, one of ordinary skill in the art would not have replaced the Wien filters of Adamec with the monochromator filter of Mook. Although the Examiner alleges that a Wien filter and a monochromator are recognized in the art as equivalents, in view of the aforementioned discussion, and

what is disclosed in the respective references of Adamec and Mook, it is clear that a Wien filter and a monochromator filter are not recognized as being equivalent.

Furthermore, as previously discussed in the remarks in response to the Office Action of June 2, 2009, Mook actually teaches away from using a monochromator filter in combination with an aperture plate having a moveable slit (see Mook, page 131, left column, line 14+). Therefore, one of ordinary skill in the art, in view of the disclosures in Mook, Eguchi and Adamec would not have been led to combine a moveable aperture of Eguchi and a monochromator filter of Mook with the device in Adamec, as Mook clearly teaches away from combining a monochromator filter with an aperture plate having a moveable slit (aperture).

Based on the foregoing, Applicants respectfully submit that independent claim 1 is distinguishable over the cited prior art references. In addition, Applicants respectfully submit that the dependent claims, which depend from independent claim 1, recite additional subject matter that is novel and non-obvious over the cited prior art for at least the same reasons as discussed above with regard to claim 1, and further for reciting additional elements which, in combination with the subject matter of claim 1, presents novel and non-obvious subject matter over the cited prior art.

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance.

Respectfully submitted,

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